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APR 30 2002

TECH CENTER 1600/2900



1600

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/511,939

DATE: 04/24/2002
 TIME: 14:20:55

Input Set : A:\seqlist.ST25.txt
 Output Set: N:\CRF3\04242002\I511939.raw

p6

#14

3 <110> APPLICANT: Tomlinson, Ian M
 4 Winter, Gregory
 6 <120> TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
 Ligands

8 <130> FILE REFERENCE: 8039/1070
 10 <140> CURRENT APPLICATION NUMBER: US 09/511,939

C--> 11 <141> CURRENT FILING DATE: 2002-04-10
 13 <150> PRIOR APPLICATION NUMBER: GB 9722131.1
 14 <151> PRIOR FILING DATE: 1997-10-20
 16 <150> PRIOR APPLICATION NUMBER: US 60/065,248
 17 <151> PRIOR FILING DATE: 1997-11-13
 19 <150> PRIOR APPLICATION NUMBER: US 60/066,729
 20 <151> PRIOR FILING DATE: 1997-11-21
 22 <150> PRIOR APPLICATION NUMBER: PCT/GB98/03135
 23 <151> PRIOR FILING DATE: 1998-10-20
 25 <160> NUMBER OF SEQ ID NOS: 350
 27 <170> SOFTWARE: PatentIn version 3.1

ENTERED

29 <210> SEQ ID NO: 1
 30 <211> LENGTH: 720
 31 <212> TYPE: DNA
 32 <213> ORGANISM: Homo sapiens
 34 <400> SEQUENCE: 1
 35 gaggtgcagc tgttgagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
 37 tccgtgtcag cctctggtatt cacttttagc agctatgcc tggagctgggt ccgccaggct 120
 39 ccagggaagg ggctggagt ggtctcagct attagtggta gtgggtgtag cacatactac 180
 41 gcagactccg tgaaggccg gttcaccatc tccagagaca attccaagaa cagctgtat 240
 43 ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaaagtatt 300
 45 ggtgcttttg actactgggg ccagggaacc ctggtcaccg tctcgagcgg tggaggcggg 360
 47 tcaggcggag gtggcagcgg cggtggcggg tgcacggaca tccagatgac ccagtctcca 420
 49 tcttccctgt ctgcatctgt aggagacaga gtcaccatca cttgccgggc aagtcagagc 480
 51 attagcagct atttaaattg gtatcagcag aaaccaggga aagcccctaa gctcctgac 540
 53 tatgctgcat ccagtttgca aagtgggggtc ccatcaagggt tcagtggcag tggatctggg 600
 55 acagatttca ctctcaccat cagcagctctg caacctgaag attttgcaac ttactactgt 660
 57 caacagagtt acagtacccc taatacgttc ggccaaggga ccaagggtgga aatcaaacgg 720

60 <210> SEQ ID NO: 2
 61 <211> LENGTH: 240
 62 <212> TYPE: PRT
 63 <213> ORGANISM: Homo sapiens
 65 <400> SEQUENCE: 2
 67 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 68 1 5 10 15
 71 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 72 20 25 30
 75 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

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76          35          40          45
79 Ser Ala Ile Ser Gly Ser Gly Ser Thr Tyr Tyr Ala Asp Ser Val
80          50          55          60
83 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
84 65          70          75          80
87 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
88          85          90          95
91 Ala Lys Ser Tyr Gly Ala Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val
92          100          105          110
95 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly
96          115          120          125
99 Gly Gly Ser Thr Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
100          130          135          140
103 Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser
104 145          150          155          160
107 Ile Ser Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
108          165          170          175
111 Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
112          180          185          190
115 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
116          195          200          205
119 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr
120          210          215          220
123 Ser Thr Pro Asn Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
124 225          230          235          240

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127 <210> SEQ ID NO: 3

128 <211> LENGTH: 7

129 <212> TYPE: DNA

130 <213> ORGANISM: Artificial Sequence

132 <220> FEATURE:

133 <223> OTHER INFORMATION: Artificial DVT variable codons used to introduce sequence

diversi

134 ty.

136 <220> FEATURE:

137 <221> NAME/KEY: misc_feature

138 <222> LOCATION: (1)..(7)

139 <223> OTHER INFORMATION: Artificial DVT variable codons used to introduce sequence

diversi

140 ty

143 <400> SEQUENCE: 3

144 agtagct

147 <210> SEQ ID NO: 4

148 <211> LENGTH: 7

149 <212> TYPE: DNA

150 <213> ORGANISM: Artificial Sequence

152 <220> FEATURE:

153 <223> OTHER INFORMATION: Artificial DVC variable codon used to introduce sequence

diversit

154 y.

156 <220> FEATURE:

157 <221> NAME/KEY: misc_feature

158 <222> LOCATION: (1)..(7)

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159 <223> OTHER INFORMATION: Artificial DVC variable codon used to introduce sequence
diversit
160      Y.
163 <400> SEQUENCE: 4
164 agtagcc
167 <210> SEQ ID NO: 5
168 <211> LENGTH: 7
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Artificial DVY codon used to introduce sequence variation.
175 <220> FEATURE:
176 <221> NAME/KEY: misc_feature
177 <222> LOCATION: (1)..(7)
178 <223> OTHER INFORMATION: Artificial DVY codon used to introduce sequence variation.
181 <400> SEQUENCE: 5
182 agtagcy
185 <210> SEQ ID NO: 6
186 <211> LENGTH: 15
187 <212> TYPE: PRT
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Example of artificial linker sequence useful between VH and
VL do
192      mains of scFV.
194 <220> FEATURE:
195 <221> NAME/KEY: MISC_FEATURE
196 <223> OTHER INFORMATION: Example of artificial linker sequence useful between VL and
VH do
197      mains of scFv.
200 <400> SEQUENCE: 6
202 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
203 1      5      10      15
206 <210> SEQ ID NO: 7
207 <211> LENGTH: 5
208 <212> TYPE: PRT
209 <213> ORGANISM: Homo sapiens
211 <400> SEQUENCE: 7
213 Ser Tyr Ala Met Ser
214 1      5
217 <210> SEQ ID NO: 8
218 <211> LENGTH: 17
219 <212> TYPE: PRT
220 <213> ORGANISM: Homo sapiens
222 <400> SEQUENCE: 8
224 Ile Ile Gly Ser Glu Gly Trp Pro Thr Ile Tyr Ala Asp Ser Val Lys
225 1      5      10      15
228 Gly
232 <210> SEQ ID NO: 9
233 <211> LENGTH: 7
234 <212> TYPE: PRT
235 <213> ORGANISM: Homo sapiens

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```

237 <400> SEQUENCE: 9
239 Gly Gly Ser Met Phe Asp Tyr
240 1 5
243 <210> SEQ ID NO: 10
244 <211> LENGTH: 11
245 <212> TYPE: PRT
246 <213> ORGANISM: Homo sapiens
248 <400> SEQUENCE: 10
250 Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
251 1 5 10
254 <210> SEQ ID NO: 11
255 <211> LENGTH: 7
256 <212> TYPE: PRT
257 <213> ORGANISM: Homo sapiens
259 <400> SEQUENCE: 11
261 Arg Ala Ser Ser Leu Gln Ser
262 1 5
265 <210> SEQ ID NO: 12
266 <211> LENGTH: 9
267 <212> TYPE: PRT
268 <213> ORGANISM: Homo sapiens
270 <400> SEQUENCE: 12
272 Gln Gln Ser Ser Asn Thr Pro Tyr Thr
273 1 5
276 <210> SEQ ID NO: 13
277 <211> LENGTH: 5
278 <212> TYPE: PRT
279 <213> ORGANISM: Homo sapiens
281 <400> SEQUENCE: 13
283 Ala Tyr Ala Met Thr
284 1 5
287 <210> SEQ ID NO: 14
288 <211> LENGTH: 17
289 <212> TYPE: PRT
290 <213> ORGANISM: Homo sapiens
292 <400> SEQUENCE: 14
294 Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
295 1 5 10 15
298 Gly
302 <210> SEQ ID NO: 15
303 <211> LENGTH: 7
304 <212> TYPE: PRT
305 <213> ORGANISM: Homo sapiens
307 <400> SEQUENCE: 15
309 Lys Ala Ser Ser Phe Asp Tyr
310 1 5
313 <210> SEQ ID NO: 16
314 <211> LENGTH: 11
315 <212> TYPE: PRT

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Input Set : A:\seqlist.ST25.txt

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316 <213> ORGANISM: Homo sapiens
318 <400> SEQUENCE: 16
320 Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
321 1 5 10
324 <210> SEQ ID NO: 17
325 <211> LENGTH: 7
326 <212> TYPE: PRT
327 <213> ORGANISM: Homo sapiens
329 <400> SEQUENCE: 17
331 Ala Ala Ser Ser Leu Gln Ser
332 1 5
335 <210> SEQ ID NO: 18
336 <211> LENGTH: 9
337 <212> TYPE: PRT
338 <213> ORGANISM: Homo sapiens
340 <400> SEQUENCE: 18
342 Gln Gln Ser Tyr Ser Thr Pro Ser Thr
343 1 5
346 <210> SEQ ID NO: 19
347 <211> LENGTH: 5
348 <212> TYPE: PRT
349 <213> ORGANISM: Homo sapiens
351 <400> SEQUENCE: 19
353 Ser Tyr Ala Met Ser
354 1 5
357 <210> SEQ ID NO: 20
358 <211> LENGTH: 17
359 <212> TYPE: PRT
360 <213> ORGANISM: Homo sapiens
362 <400> SEQUENCE: 20
364 Leu Ile Ser Pro Leu Gly Lys Asp Thr Ser Tyr Ala Asp Ser Val Lys
365 1 5 10 15
368 Gly
372 <210> SEQ ID NO: 21
373 <211> LENGTH: 7
374 <212> TYPE: PRT
375 <213> ORGANISM: Homo sapiens
377 <400> SEQUENCE: 21
379 Arg Ala Gly Ile Phe Asp Tyr
380 1 5
383 <210> SEQ ID NO: 22
384 <211> LENGTH: 11
385 <212> TYPE: PRT
386 <213> ORGANISM: Homo sapiens
388 <400> SEQUENCE: 22
390 Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
391 1 5 10
394 <210> SEQ ID NO: 23
395 <211> LENGTH: 7

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/511,939

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Input Set : A:\seqlist.ST25.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:320; N Pos. 23,24,29,30,32,33,38,39,41,42,44,45,50,51
Seq#:323; N Pos. 23,24,26,27,29,30,32,33
Seq#:326; N Pos. 21,22,30,31
Seq#:329; N Pos. 23,24,29,30,32,33,35,36,38,39
Seq#:332; N Pos. 21,22,27,28,33,34
Seq#:335; N Pos. 23,24,26,27,29,30,32,33
Seq#:338; N Pos. 21,22,27,28,30,31,33,34
Seq#:341; N Pos. 23,24